

09/1104, 448.

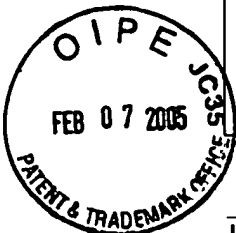
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Cofc \$

I hereby certify that this correspondence is being deposited with the U.S. Postal Service as Express Mail, Airbill No. EV 307 814 144 US, in an envelope addressed to: MS Post Issue, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on the date shown below

Dated: 2/7/05 Signature: *[Signature]*
(Lon Giuffrida)

Docket No.: 60693US (49163)
(PATENT)



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Letters Patent of:
Barry J. Byrne et al.

Patent No.: 6,783,972 B1

Issued: August 31, 2004

For: METHODS FOR LARGE-SCALE
PRODUCTION OF RECOMBINANT AAV
VECTORS

**REQUEST FOR CERTIFICATE OF CORRECTION
PURSUANT TO 37 CFR 1.323**

MS Post Issue
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

**Certificate
FEB 16 2005
of Correction**

Dear Sir:

Upon reviewing the above-identified patent, Patentee noted an error concerning an omission of an Assignee which should be added and/or corrected.

Applicants inadvertently failed to request listing of the co-assignee, The Johns Hopkins University, when submitting the payment of Issue Fee. Included with this request are copies of the recorded assignment documents clearly showing that The Johns Hopkins University and University of Florida Research Foundation are co-assignees. Should a fee be required under 37 CFR §120(a), please charge our Deposit Account No. 04-1105 in the amount of \$100.00.

The omission now sought to be corrected is our inadvertent error, the correction of which does not involve new matter or require reexamination.

02/11/2005 SSITHIB2 00000129 041105 6783972
01 FC:1811 100.00 DA

FEB 17 2005

Transmitted herewith is a proposed Certificate of Correction effecting such amendment. Patentee respectfully solicits the granting of the requested Certificate of Correction.

The Director is hereby authorized to charge any deficiency in the fees filed, asserted to be filed or which should have been filed herewith (or with any paper hereafter filed in this application by this firm) to our Deposit Account No. 04-1105, under Order No. 60693US (49163).

Dated: February 7, 2005

Respectfully submitted,

By Barbara S. Kitchell

Barbara S. Kitchell

Registration No.: 33,928

EDWARDS & ANGELL, LLP

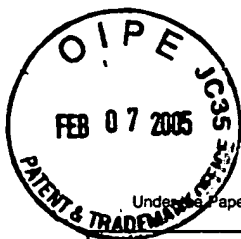
P.O. Box 55874

Boston, Massachusetts 02205

(203) 353-6848

Attorney for Applicant

FEB 17 2005



Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

PTO/SB/44 (04-04)
Approved for use through 04/30/2007. OMB 0651-0033
U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE
(Also Form PTO-1050)

UNITED STATES PATENT AND TRADEMARK OFFICE CERTIFICATE OF CORRECTION

PATENT NO. : 6,783,972 *B1*
DATED : August 31, 2004
INVENTOR(S) : Barry J. Byrne et al.

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

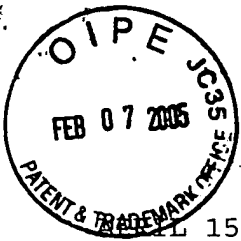
****ASSIGNEE**:** Please add the following additional Assignee:

**THE JOHNS HOPKINS UNIVERSITY
BALTIMORE, MD (US)**

MAILING ADDRESS OF SENDER:
Barbara S. Kitchell
EDWARDS & ANGELL, LLP
P.O. Box 55874
Boston, Massachusetts 02205

PATENT NO. 6,783,972

No. of additional copies



BSL



UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office
ASSISTANT SECRETARY AND COMMISSIONER
OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

FEB 15, 2000

PTAS
WILLIAMS, MORGAN, & AMERSON, P.C.
DAVID W. HIBLER
7676 HILLMONT, SUITE 250
HOUSTON, TEXAS 77040

DOCKETING DEPT.



101264877A

APR 20 2000

WILLIAMS, MORGAN & AMERSON

UNITED STATES PATENT AND TRADEMARK OFFICE
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PLEASE REVIEW ALL INFORMATION CONTAINED ON THIS NOTICE. THE INFORMATION CONTAINED ON THIS RECORDATION NOTICE REFLECTS THE DATA PRESENT IN THE PATENT AND TRADEMARK ASSIGNMENT SYSTEM. IF YOU SHOULD FIND ANY ERRORS OR HAVE QUESTIONS CONCERNING THIS NOTICE, YOU MAY CONTACT THE EMPLOYEE WHOSE NAME APPEARS ON THIS NOTICE AT 703-308-9723. PLEASE SEND REQUEST FOR CORRECTION TO: U.S. PATENT AND TRADEMARK OFFICE, ASSIGNMENT DIVISION, BOX ASSIGNMENTS, CG-4, 1213 JEFFERSON DAVIS HWY, SUITE 320, WASHINGTON, D.C. 20231.

RECORDATION DATE: 01/10/2000

REEL/FRAME: 010530/0762
NUMBER OF PAGES: 4

BRIEF: ASSIGNMENT OF ASSIGNOR'S INTEREST (SEE DOCUMENT FOR DETAILS).

ASSIGNOR:

BYRNE, BARRY J.

DOC DATE: 12/16/1999

ASSIGNOR:

MUZYCZKA, NICHOLAS

DOC DATE: 12/16/1999

ASSIGNOR:

ZOLOTUKHIN, SERGEI

DOC DATE: 12/16/1999

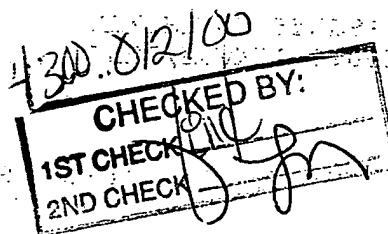
ASSIGNEE:

FLORIDA, UNIVERSITY OF
1938 W. UNIVERSITY AVENUE
GAINESVILLE, FLORIDA 32603

SERIAL NUMBER: 09404448
PATENT NUMBER:

FILING DATE: 09/22/1999
ISSUE DATE:

TELEVISION SET: 09/22/1999



ASSIGNMENT

FOR GOOD AND VALUABLE CONSIDERATION, the receipt, sufficiency and adequacy of which are hereby acknowledged, the undersigned, do hereby:

SELL, ASSIGN AND TRANSFER to University of Florida (the "Assignee"), having a place of business at 1938 W. University Avenue, Gainesville, Florida, 32603, our entire right, title and interest for the United States and all foreign countries in and to any and all improvements which are disclosed in the application for United States Letters Patent, Serial No. 09/404,448 which has been filed on September 22, 1999 and is entitled "**METHODS FOR LARGE-SCALE PRODUCTION OF RECOMBINANT AAV VECTORS**", such application and all divisional, continuing, substitute, renewal, reissue and all other applications for patent which have been or shall be filed in the United States and all foreign countries on any of such improvements; all original and reissued patents which have been or shall be issued in the United States and all foreign countries on such improvements; and specifically including the right to file foreign applications under the provisions of any convention or treaty and claim priority based on such application in the United States;

AUTHORIZE AND REQUEST the issuing authority to issue any and all United States and foreign patents granted on such improvements to the Assignee;

WARRANT AND COVENANT that no assignment, grant, mortgage, license or other agreement affecting the rights and property herein conveyed has been or will be made to others by the undersigned, and that the full right to convey the same as herein expressed is possessed by the undersigned;

COVENANT, when requested and at the expense of the Assignee, to carry out in good faith the intent and purpose of this assignment, the undersigned will execute all divisional, continuing, substitute, renewal, reissue, and all other patent applications on any and all such improvements; execute all rightful oaths, declarations, assignments, powers of attorney and other papers; communicate to the Assignee all facts known to the undersigned relating to such improvements and the history thereof; and generally do everything possible which the Assignee shall consider desirable for vesting title to such improvements in the Assignee, and for securing, maintaining and enforcing proper patent protection for such improvements;

TO BE BINDING on the heirs, assigns, representatives and successors of the undersigned and extend to the successors, assigns and nominees of the Assignee.

Signature: [Signature]
Name: Barry J. Byrne

Date: 12/16/99

STATE OF FLORIDA)
) ss.
COUNTY OF Alachua)

BEFORE ME, the undersigned authority, on this 16 day of Dec., 1999, personally appeared Barry J. Byrne, known to me to be the person whose name is subscribed to the foregoing instrument and acknowledged to me that he executed the same of his own free will for the purposes and consideration therein expressed.

Vicky R. Parrott
Notary or Consular Officer

[SEAL]



Vicky R. Parrott
MY COMMISSION # CC864994 EXPIRES
August 22, 2003
BONDED THRU TROY FAIR INSURANCE, INC.

Signature: Nicholas Muzyczka
Name: Nicholas Muzyczka

Date: 12/16/99

STATE OF FLORIDA)
) ss.
COUNTY OF Alachua)

BEFORE ME, the undersigned authority, on this 16 day of Dec., 1999, personally appeared Nicholas Muzyczka, known to me to be the person whose name is subscribed to the foregoing instrument and acknowledged to me that he executed the same of his own free will for the purposes and consideration therein expressed.

Vicky R. Parrott
Notary or Consular Officer

[SEAL]



Vicky R. Parrott
MY COMMISSION # CC864994 EXPIRES
August 22, 2003
BONDED THRU TROY FAIR INSURANCE, INC.

Signature: _____

Name: Sergei Zolotukhin

Date: _____

12/16/99

STATE OF FLORIDA)

) ss.

COUNTY OF Alachua)

BEFORE ME, the undersigned authority, on this 16 day of Dec., 1999, personally appeared Sergei Zolotukhin, known to me to be the person whose name is subscribed to the foregoing instrument and acknowledged to me that he executed the same of his own free will for the purposes and consideration therein expressed.

Vicky R. Parrott
Notary or Consular Officer

[SEAL]



Vicky R. Parrott
MY COMMISSION # CC364994 EXPIRES
August 22, 2003
BONDED THRU TROY FAIR INSURANCE, INC

010530/0762 PAGE 2

ALLYSON PURNELL, EXAMINER
ASSIGNMENT DIVISION
OFFICE OF PUBLIC RECORDS

02-10-2000

FORM PTO-1595
(Rev. 6-93)

RE



OMB No. 0651-0011 (exp. 4/94)

101264877

U.S. Department of Commerce
Patent and Trademark Office

To the Honorable Commissioner of Patents and Trademarks: Please record the attached original document or copy thereof.

1. Name of conveying party(ies):

Barry J. Byrne, Nicholas Muzyczka and Sergei ZolotukhinAdditional name(s) of conveying party(ies) attached? ☒ Yes ☐ No

3. Nature of conveyance:



Assignment



Merger



Security Agreement



Change of Name



Other

Execution Date: December 16, 1999

2. Name and address of receiving party(ies):

Name: University of Florida

Street Address: 1938 W. University Avenue

City: Gainesville State: Florida Zip: 32603

Additional name(s) & address(es) attached? ☒ Yes ☐ No

4. Application number(s) or registration number(s):

If this document is being filed together with a new application, the execution date of the application is:

A. Patent Application No.(s):

09/404,448

B. Patent No.(s):

Additional numbers attached? ☐ Yes ☒ No

5. Name and address of party to whom correspondence concerning document should be mailed:

Name: David W. Hibler
Williams, Morgan & Amerson, P.C.
7676 Hillmont, Suite 250

City: Houston State: Texas Zip: 77040

6. Total number of applications and patents involved: 17. Total fee (37 C.F.R. 3.41) \$ 80.00☒ Enclosed☒ Authorized to be charged to deposit account
if check insufficient or inadvertently omitted8. Deposit account number: 50-0786/4300.012100
(Attach duplicate copy of this page if paying by deposit account)

DO NOT USE THIS SPACE

9. Statement and signature.

To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document.

David W. Hibler

1/6/2000

Name of Person Signing, Reg. No. 41,071

Signature

Date

Total number of pages including cover sheet, attachments and documents: 7Mail documents to be recorded with required cover sheet information to:
Commissioner of Patents and Trademarks, Box Assignment
Washington, D.C. 20231

02/10/2000 DHSUYEN 00000021 09404448

01 FC:581

40.00 OP

CERTIFICATE OF MAILING
37 C.F.R. 1.8

I hereby certify that this correspondence is being deposited with the U.S. Postal Service as First Class Mail in an envelope addressed to: Commissioner of Patents and Trademarks, Washington, D.C. 20231, on the date below:

January 6, 2000

Date

David W. Hibler

B3K



UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office
ASSISTANT SECRETARY AND COMMISSIONER
OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

APRIL 15, 2000

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PTAS

WILLIAMS, MORGAN & AMERSON, P.C. APR 20 2000

DAVID W. HIBLER
7676 HILLMONT, SUITE 250
HOUSTON, TX 77040



101264876A

WILLIAMS, MORGAN & AMERSON

UNITED STATES PATENT AND TRADEMARK OFFICE
NOTICE OF RECORDATION OF ASSIGNMENT DOCUMENT

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PLEASE REVIEW ALL INFORMATION CONTAINED ON THIS NOTICE. THE INFORMATION CONTAINED ON THIS RECORDATION NOTICE REFLECTS THE DATA PRESENT IN THE PATENT AND TRADEMARK ASSIGNMENT SYSTEM. IF YOU SHOULD FIND ANY ERRORS OR HAVE QUESTIONS CONCERNING THIS NOTICE, YOU MAY CONTACT THE EMPLOYEE WHOSE NAME APPEARS ON THIS NOTICE AT 703-308-9723. PLEASE SEND REQUEST FOR CORRECTION TO: U.S. PATENT AND TRADEMARK OFFICE, ASSIGNMENT DIVISION, BOX ASSIGNMENTS, CG-4, 1213 JEFFERSON DAVIS HWY, SUITE 320, WASHINGTON, D.C. 20231.

RECORDATION DATE: 01/10/2000

REEL/FRAME: 010530/0775

NUMBER OF PAGES: 3

BRIEF: ASSIGNMENT OF ASSIGNOR'S INTEREST (SEE DOCUMENT FOR DETAILS).

ASSIGNOR:

CONWAY, JAMES E.

DOC DATE: 11/24/1999

ASSIGNOR:

HAYWARD, GARY S.

DOC DATE: 11/24/1999

ASSIGNEE:

JOHNS HOPKINS UNIVERSITY, THE
111 MARKET PLACE, SUITE 906
BALTIMORE, MARYLAND 21202

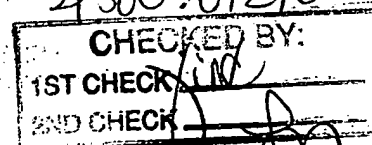
SERIAL NUMBER: 09404448

FILING DATE: 09/22/1999

PATENT NUMBER:

ISSUE DATE:

SEDLEY PYNE, PARALEGAL
ASSIGNMENT DIVISION
OFFICE OF PUBLIC RECORDS



ASSIGNMENT

FOR GOOD AND VALUABLE CONSIDERATION, the receipt, sufficiency and adequacy of which are hereby acknowledged, the undersigned, does hereby:

SELL, ASSIGN AND TRANSFER to The Johns Hopkins University (the "Assignee"), having a place of business at 111 Market Place, Suite 906, Baltimore, Maryland 21202, my entire right, title and interest for the United States and all foreign countries in and to any and all improvements which are disclosed in the application for United States Letters Patent, Serial No. **09/404,448** which has been filed on **September 22, 1999** and is entitled "**METHODS FOR LARGE-SCALE PRODUCTION OF RECOMBINANT AAV VECTORS**", such application and all divisional, continuing, substitute, renewal, reissue and all other applications for patent which have been or shall be filed in the United States and all foreign countries on any of such improvements; all original and reissued patents which have been or shall be issued in the United States and all foreign countries on such improvements; and specifically including the right to file foreign applications under the provisions of any convention or treaty and claim priority based on such application in the United States;

AUTHORIZE AND REQUEST the issuing authority to issue any and all United States and foreign patents granted on such improvements to the Assignee;

WARRANT AND COVENANT that no assignment, grant, mortgage, license or other agreement affecting the rights and property herein conveyed has been or will be made to others by the undersigned, and that the full right to convey the same as herein expressed is possessed by the undersigned;

COVENANT, when requested and at the expense of the Assignee, to carry out in good faith the intent and purpose of this assignment, the undersigned will execute all divisional, continuing, substitute, renewal, reissue, and all other patent applications on any and all such improvements; execute all rightful oaths, declarations, assignments, powers of attorney and other papers; communicate to the Assignee all facts known to the undersigned relating to such improvements and the history thereof; and generally do everything possible which the Assignee shall consider desirable for vesting title to such improvements in the Assignee, and for securing, maintaining and enforcing proper patent protection for such improvements;

TO BE BINDING on the heirs, assigns, representatives and successors of the undersigned and extend to the successors, assigns and nominees of the Assignee.

Signature: James E. Conway Date: Nov 19, 1999
Name: James E. Conway James E. Conway November 24, 1999

STATE OF MARYLAND)
) ss.
COUNTY OF Cecil Cecil)

BEFORE ME, the undersigned authority, on this 24 day of November, 1999, personally appeared James E. Conway, known to me to be the person whose name is subscribed to the foregoing instrument and acknowledged to me that he executed the same of his own free will for the purposes and consideration therein expressed.

Elizabeth H. Norris
Notary or Consular Officer

[SEAL]

ELIZABETH H. NORRIS
NOTARY PUBLIC
COMMISSION EXPIRES 3/1/02

Signature: Gary S. Hayward Date: Nov 24, 1999
Name: Gary S. Hayward

STATE OF MARYLAND)
) ss.
COUNTY OF Baltimore)

BEFORE ME, the undersigned authority, on this 24th day of November, 1999, personally appeared Gary S. Hayward, known to me to be the person whose name is subscribed to the foregoing instrument and acknowledged to me that he executed the same of his own free will for the purposes and consideration therein expressed.

Gabriel R. King
Notary or Consular Officer

[SEAL]

my commission expires 6/1/01

02-10-2000

FORM PTO-1595
(Rev. 6-93)

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U.S. Department of Commerce

OMB No. 0651-0011 (exp. 4/94)

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101264876

Patent and Trademark Office

OPR/FINANCE

To be filed with the Commissioner of Patents and Trademarks: Please record the attached original document or copy thereof.

1. Name of conveying party(ies):

James E. Conway and Gary S. HaywardAdditional name(s) of conveying party(ies) attached? ☒ Yes ☐ No

3. Nature of conveyance:

☒ Assignment☐ Merger☐ Security Agreement☐ Change of Name☐ Other

Execution Date: November 24, 1999

2. Name and address of receiving party(ies):

Name: The Johns Hopkins University

Street Address: 111 Market Place, Suite 906

City: Baltimore State: Maryland Zip: 21202

Additional name(s) & address(es) attached? ☒ Yes ☐ No

4. Application number(s) or registration number(s):

If this document is being filed together with a new application, the execution date of the application is:

A. Patent Application No.(s):

09/404,448

B. Patent No.(s):

Additional numbers attached? ☐ Yes ☒ No

5. Name and address of party to whom correspondence concerning document should be mailed:

Name: David W. Hibler
Williams, Morgan & Amerson, P.C.
7676 Hillmont, Suite 250

City: Houston State: Texas Zip: 77040

6. Total number of applications and patents involved: 17. Total fee (37 C.F.R. 3.41) _____ \$ 80.00☒ Enclosed☒ Authorized to be charged to deposit account
if check insufficient or inadvertently omitted

8. Deposit account number: 50-0786/4300.012100

(Attach duplicate copy of this page if paying by deposit account)

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9. Statement and signature.

To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document.

David W. Hibler

David W. Hibler

1/6/2000

Name of Person Signing, Reg. No. 41,071

Signature

Date

Total number of pages including cover sheet, attachments and documents: 7Mail documents to be recorded with required cover sheet information to:
Commissioner of Patents and Trademarks, Box Assignment
Washington, D.C. 20231CERTIFICATE OF MAILING
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January 6, 2000

Date

David W. Hibler

David W. Hibler

02/10/2000 DNGUYEN 00000022 09404448

01 FC:581

40.00 09



UNITED STATES
PATENT AND
TRADEMARK OFFICE

APRIL 19, 2002

Chief Financial Officer and Chief Administrative Officer
Washington, DC 20231
www.uspto.gov

PTAS
WILLIAMS, MORGAN & AMERSON, P.C.
MARK D. MOORE
7676 HILLMONT, SUITE 250
HOUSTON, TEXAS 77040



101996745A

DOCKETING DEPT

UNITED STATES PATENT AND TRADEMARK OFFICE
NOTICE OF RECORDATION OF ASSIGNMENT DOCUMENT

APR 25 2002

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RECORDATION DATE: 02/19/2002

REEL/FRAME: 012600/0400
NUMBER OF PAGES: 3

BRIEF: ASSIGNMENT OF ASSIGNOR'S INTEREST (SEE DOCUMENT FOR DETAILS).

ASSIGNOR:
FLORIDA, UNIVERSITY OF

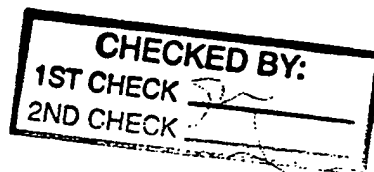
DOC DATE: 12/12/2001

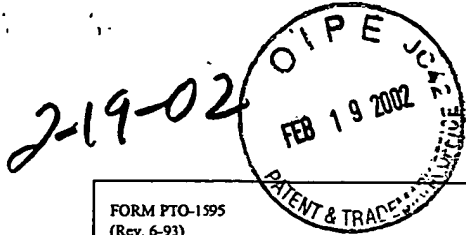
ASSIGNEE:
UNIVERSITY OF FLORIDA RESEARCH
FOUNDATION
223 GRINTER HALL
GAINESVILLE, FLORIDA 32611

SERIAL NUMBER: 09404448
PATENT NUMBER:

FILING DATE: 09/22/1999
ISSUE DATE:

TONYA LEE, EXAMINER
ASSIGNMENT DIVISION
OFFICE OF PUBLIC RECORDS





02-27-2002

FORM PTO-1595
(Rev. 6-93)

OMB No. 0651-0011 (exp. 4/94)

101996745
PATENTS ONLY

U.S. Department of Commerce

Patent and Trademark Office

To the Honorable Commissioner of Patents and Trademarks: Please record the attached original document or copy thereof.

1. Name of conveying party(ies):

University of Florida

Additional name(s) of conveying party(ies) attached? ☐ Yes ☒ No

3. Nature of conveyance:



Assignment



Merger



Security Agreement



Change of Name



Other

Execution Date: December 12, 2001

2. Name and address of receiving party(ies):

Name: University of Florida Research
Foundation

Internal Address: 223 Grinter Hall

Street Address:

City: Gainesville State: FL Zip: 32611

Additional name(s) & address(es) attached? ☐ Yes ☒ No

4. Application number(s) or registration number(s):

If this document is being filed together with a new application, the execution date of the application is:

A. Patent Application No.(s):

09/404,448

B. Patent No.(s):

Additional numbers attached? ☐ Yes ☒ No5. Name and address of party to whom correspondence concerning
document should be mailed:Name: Mark D. Moore
Williams, Morgan & Amerson, P.C.
7676 Hillmont, Suite 250

City: Houston State: Texas Zip: 77040

6. Total number of applications and patents involved: 17. Total fee (37 C.F.R. 3.41) \$ 40.00☒ Enclosed☒ Authorized to be charged to deposit account
if check insufficient or inadvertently omitted

8. Deposit account number: 50-0786/4300.012100

(Attach duplicate copy of this page if paying by deposit account)

DO NOT USE THIS SPACE

9. Statement and signature.

To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document.

MARK D. MOORE

02/01/02

Name of Person Signing, Reg. No. 42,903

Mark D. Moore

Date

Total number of pages including cover sheet, attachments and documents: 3

02/27/2002 6TON11 00000024 09404448

01 FC:581

40.00 OP

Mail documents to be recorded with required cover sheet information to:
Commissioner of Patents and Trademarks, Box Assignment
Washington, D.C. 20231CERTIFICATE OF MAILING
37 C.F.R. 1.8I hereby certify that this correspondence is being deposited with the U.S. Postal Service as
First Class Mail in an envelope addressed to: Assistant Commissioner of Patents and
Trademarks, Washington, D.C. 20231, on the date below:February 1, 2002
Date

Mark D. Moore

ASSIGNMENT FROM THE UNIVERSITY OF FLORIDA
TO THE
UNIVERSITY OF FLORIDA RESEARCH FOUNDATION, INC.

In consideration of one dollar (\$1.00) and other good and valuable consideration, the UNIVERSITY OF FLORIDA, existing by virtue of the laws of the State of Florida, and having an office at 223 Grinter Hall, Gainesville, Florida 32611, sells and assigns to the UNIVERSITY OF FLORIDA RESEARCH FOUNDATION, INCORPORATED, a Florida not for profit corporation, having its office at 223 Grinter Hall, Gainesville, Florida 32611, its successors and assigns, its entire right, title and interest throughout the world in and to the improvements in :

A Scaleable Method for Production of Recombinant AAV, UF#-10014, U.S. Serial No. 09/404,448, filed 4/21/99, created by Barry J. Byrne, Serge Zolotukhin, Nicholas Muzyczka, James E. Conway, and Gary Hayward, inventors;

and in and to said application and all patents (foreign and domestic) which may be granted therefore and thereon, and all divisions, reissues, continuations and extensions thereof (foreign and domestic), subject to performance by the UNIVERSITY OF FLORIDA RESEARCH FOUNDATION, INCORPORATED, of the obligations of the UNIVERSITY OF FLORIDA under the UNIVERSITY OF FLORIDA's Patent Policy with regard to the above-described invention, and the UNIVERSITY OF FLORIDA covenants that it has full right to so sell and assign; and it authorizes and requests the Commissioner of Patents and Trademarks to issue all patents on said improvements or resulting therefrom to said UNIVERSITY OF FLORIDA RESEARCH FOUNDATION, INCORPORATED, as assignee; and it agrees that it will communicate to said UNIVERSITY OF FLORIDA RESEARCH FOUNDATION, INCORPORATED, or its representatives any facts known to it respecting said improvements, and testify in any legal proceedings, sign all lawful papers, execute all divisional, continuing and reissue applications, make all rightful oaths and generally do everything possible to aid said UNIVERSITY OF FLORIDA RESEARCH FOUNDATION, INCORPORATED, its successors, assigns and nominees, to obtain and enforce proper protection for said improvements in all countries.

Executed this 12 day of December, 2001.

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By: _____

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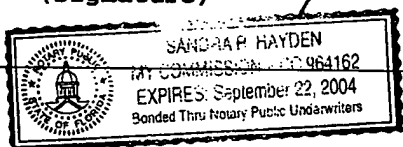
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The foregoing instrument was acknowledged before me this 12 day
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US006783972B1

(12) **United States Patent**
Byrne et al.(10) **Patent No.:** **US 6,783,972 B1**
(45) **Date of Patent:** **Aug. 31, 2004**(54) **METHODS FOR LARGE-SCALE
PRODUCTION OF RECOMBINANT AAV
VECTORS**(75) **Inventors:** **Barry J. Byrne, Gainesville, FL (US);
James E. Conway, Elkton, MD (US);
Gary S. Hayward, Towson, MD (US);
Nicholas Muzyzcka, Gainesville, FL
(US); Sergei Zolotukhin, Gainesville,
FL (US)**(73) **Assignee:** **University of Florida Research
Foundation, Gainesville, FL (US)**(*) **Notice:** Subject to any disclaimer, the term of this
patent is extended or adjusted under 35
U.S.C. 154(b) by 0 days.(21) **Appl. No.:** **09/404,448**(22) **Filed:** **Sep. 22, 1999****Related U.S. Application Data**(60) **Provisional application No. 60/101,507, filed on Sep. 22,
1998.**(51) **Int. Cl.⁷** **C12N 7/01; C12N 15/09;
C12N 15/00; C12P 21/06; C07H 21/04**(52) **U.S. Cl.** **435/235.1; 435/320.1;
435/325; 435/456; 435/69.1; 536/23.1;
514/44**(58) **Field of Search** **435/325, 235.1,
435/320.1, 456, 69.1; 536/23.1; 514/44**(56) **References Cited****U.S. PATENT DOCUMENTS**

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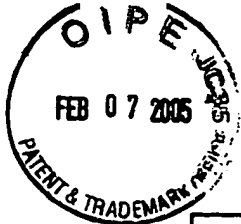
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Primary Examiner—Gerry Leffers(74) **Attorney, Agent, or Firm**—Edwards & Angell, LLP(57) **ABSTRACT**Disclosed are HSV-1 amplicons that supply all necessary
helper functions required for rAAV packaging and methods
for their use. These HSV-1 amplicons have been shown to be
capable of rescuing and replicating all forms of rAAV
genomes including rAAV genomes introduced into cells by
infection of rAAV virions, rAAV genomes transfected into
cells on plasmids or proviral rAAV genomes integrated into
cellular chromosomal DNA. Also provided are methods for
preparing high-titer rAAV vector compositions suitable for
gene therapy and the delivery of exogenous polynucleotides
to selected host cells.



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Attorney Docket No.: 60693(49163)

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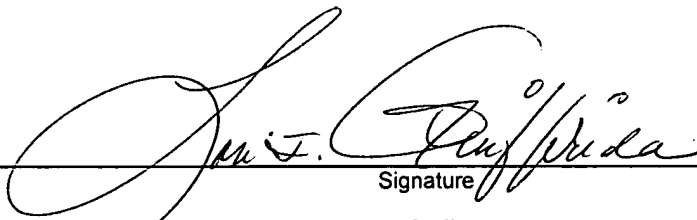
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